MODULE 1

INTRODUCTION TO INFORMATION AND COMMUNICATION TECHNOLOGY

Overview

The quickening pace of evolution in technology is very evident in this era. It seems that it is progressing faster than ever. From year to year, the evolution of technology is one of staggering promise and opportunity--as well as uncertainty. Basically, technology has been around before, and as long as there are people, information technology will be there also because there were always ways of communicating through technology available at that point in time. The future may be unknown, but digital advancement continues to reshape our world in ways that encourage people to form new habits, find new ways to work together, and become better human beings. And, in most cases, these changes translate into a range of opportunities and disruptions across every industry. Humans have always been quick to adapt technologies for better and faster communication.

Objectives

- After successful completion of this module, the student can be able to;
- Demonstrate a sense of readiness for the upcoming semester;
- Identify their learning outcomes and expectations for the course;
- Recognize their capacity to create new understandings from reflecting on the course;
- Know the role and importance of ICT.

Lesson 1: Information and Communication Technology History of ICT

ICT, or information and communications technology (or technologies), is the infrastructure and components that enable modern computing. Although there is no single, universal definition of ICT, the term is generally accepted to mean all devices, networking components, applications and systems that combined allow people and organizations (i.e., businesses, nonprofit agencies, governments and criminal enterprises) to interact in the digital world.

Uses of ICT In Our Daily Lives

Communication We all know that ICT take a major role for us by means of communicating, way back in the past our parents use to make letter and send it via post mail. But now with the help of ICT it is easier to communicate with our love ones. We can use cellular phones that design for communicating with other people even they are miles away far from you.

Nowadays people are in touch with the help of ICT. Through chatting, E-mail, voice mail and social networking people communicate with each other. It is the cheapest means of communication.

ICT allows students to monitor and manage their own learning, think critically and creatively, solve simulated real-world problems, work collaboratively, engage in ethical decision-making, and adopt a global perspective towards issues and ideas. It also provides students from remote areas access to expert teachers and learning resources, and gives administrators and policy makers the data and expertise they need to work more efficiently.

Job Opportunities
In the employment sector, ICT enables organizations to operate more efficiently, so employing staff with ICT skills is vital to the smooth running of any business. Being able to use ICT systems effectively allows employees more time to concentrate on areas of their job role that require soft skills.

For example, many pharmacies use robot technology to assist with picking prescribed drugs. This allows highly trained pharmaceutical staff to focus on jobs requiring human intelligence and interaction, such as dispensing and checking medication.

Nowadays, employers expect their staff to have basic ICT skills. This expectation even applies to job roles where ICT skills may not have been an essential requirement in the past.

Nowadays, finding a job is different, you can just use your smart phone, laptop, desktop or any gadgets that is available in the comfort of your home.

Education
Information and Communications Technology (ICT) can impact student learning when teachers are digitally literate and understand how to integrate it into curriculum.

Schools use a diverse set of ICT tools to communicate, create, disseminate, store, and manage information.(6) In some contexts, ICT has also become integral to the teaching learning interaction, through such approaches as replacing chalkboards with interactive digital whiteboards, using students' own smartphones or other devices for learning during class time, and the "flipped classroom" model where students watch lectures at home on the computer and use classroom time for more interactive exercises. When teachers are digitally literate and trained to use ICT, these approaches can lead to higher order thinking skills, provide creative and individualized options for students to express their understandings, and leave students better prepared to deal with ongoing technological change in society and the workplace.

Socializing
Social media has changed the world. The rapid and vast adoption of these technologies is changing how we find partners, how we access information from the news, and how we organize to demand political change.

The internet and social media provide young people with a range of benefits, and opportunities to empower themselves in a variety of ways. Young people can maintain social connections and support networks that otherwise wouldn't be possible and can access more information than ever before. The communities and social interactions young people form online can be invaluable for bolstering and developing young people's self-confidence and social skills.

As the ICT has become ubiquitous, faster and increasingly accessible to non-technical communities, social networking and collaborative services have grown rapidly enabling people to communicate and share interest in many more ways, sites like Facebook, Twitter LinkedIn You tube, Flicker, second life delicious blogs wiki's and many more let people of all ages rapidly share their interest of the movement without others everywhere. But Facebook seems to be the leading areas of where people communicate and share their opinions. What a change! "Nothing is permanent, but change" (As Heraditus in the 4thcentury BC). Internet can be seen as the international networks of interconnection of computer networks, the main purpose for the institution of internet are quest for information i.e. browsing, electronic mail, knew groups fill transfer and access and use of other computer. Socialization can be seen as a process by which a child adapts a behavior to be an effective member of the society, which can only be achieved through learning or education.

Impact of ICT in The Society

Positive impacts of Information and Communication Technology

- **Access to information**: Increase in access to information and services that has accompanied the growth of the Internet. Some of the positive aspects of this increased access are better, and often cheaper, communications, such as VoIP phone and Instant Messaging.
- **Improved access to education**, e.g. distance learning and online tutorials. New ways of learning, e.g. interactive multi-media and virtual reality.
- **New tools, new opportunities**: ICT gives access to new tools that did not previously exist: digital cameras, photo-editing software and high quality printers, screen magnification or screen reading software enables partially sighted or blind people to work with ordinary text rather than Braille.
- **Communication**: Cost savings by using e.g. VoIP instead of normal telephone, email / messaging instead of post, video conferencing instead of traveling to meetings, e-commerce web sites instead of sales catalogues. Access to larger, even worldwide, markets.
- **Information management**: Data mining of customer information to produce lists for targeted advertising. Improved stock control, resulting in less wastage, better cash flow, etc.
- **Security**: ICT solves or reduces some security problems, e.g. Encryption methods can keep data safe from unauthorized people, both while it is being stored or while it is being sent electronically.
- ICT allows people to **participate in a wider**, even worldwide, society. • Distance learning: students can access teaching materials from all over the world.
- ICT facilitates the ability to perform '**impossible' experiments'** by using simulations.
- Creation of **new more interesting jobs**. Examples would be systems analysts, programmers and software engineers, as well as help desk operators and trainers.

Negative impacts of Information and Communication Technology

- **Job loss**: Manual operations being replaced by automation. e.g. robots replacing people on an assembly line. Job export. e.g. Data processing work being sent to other countries where operating costs are lower. Multiple workers being replaced by a smaller number who are able to do the same amount of work. e.g. A worker on a supermarket checkout can serve more customers per hour if a bar-code scanner linked to a computerized till is used to detect goods instead of the worker having to enter the item and price manually
- **Reduced personal interaction**: Most people need some form of social interaction in their daily lives and if they do not get the chance to meet and talk with other people they may feel isolated and unhappy.
- **Reduced physical activity:** This can lead to health problems such as obesity, heart disease, and diabetes.
- **Cost**: A lot of ICT hardware and software is expensive, both to purchase and to maintain. An ICT system usually requires specialist staff to run it and there is also the challenge of keeping up with ever-changing technology.
- **Competition**: this is usually thought of as being a good thing, but for some organizations being exposed to greater competition can be a problem. If the organization is competing for customers, donations, or other means of funding nationally or even internationally, they may lose out to other organizations that can offer the same service for less money.